# THE VETERINARY RECORD

A Weekly Journal for the Profession.

EDITED BY WILLIAM HUNTING, F.R.C.V.S.

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### THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

We know very little about this Institute except that it was promoted by some of the leaders of science in this country about the time when unscientific persons lost their heads over Koch's tuberculine. We believe it will be devoted to the study of disease in the laboratory, and that chemistry and bacteriology will be the leading pursuits. In such an undertaking the Royal College of Veterinary Surgeons should surely have some part if only to check the vagaries of experimenters who look to eruptions on cow's udders as a common and dangerous cause of disease in human beings. We might also afford some useful information on such disorders as Tuberculosis, Anthrax, and Glanders which would naturally come under the consideration of a body studying preventive medicine.

Of course we should not offer our co-operation if we were not wanted but we should not neglect any inquiry which would prevent our being, *through a mistake*, left out in the cold, as so nearly happened with the Hygienic Congress. In a paragraph, chiefly devoted to horse-shoeing, of the report of the veterinary committee of the Royal Agricultural Society we discovered the following—"A letter had been received from Sir Joseph Lister, President of the British Institute of Preventive Medicine, inviting the Council of the Society to nominate a representative upon the Council of the Institute." Is the Agriculturist more interested in Preventive Medicine than the Veterinarian?

### THE INDIAN CIVIL DEPARTMENT.

A circular has been issued by the War Office calling for volunteers to join the Indian Veterinary Department. The candidates will be bound for "continuous service" in India, and will be called upon to resume military duty in the event of serious war– whatever that means. The circular goes on to say that the Civil Department will receive the same pay as the military plus a staff allowance. So far good; but we wish to draw the attention of intending candidates to the fact that nothing is said about ordinary leave, sick leave, retiring allowance, &c. They will get a staff allowance, and will serve continuously in India. These omissions suggest caution. To be an uncovenanted Indian civilian is not the happiest way of making provision for the future, and the Government of India enjoys a very evil reputation in regard to its dealings with the Veterinary Department. On this account it is desirable that all important points should be settled in black and white before anyone volunteers for what is perpetual exile, according to the circular. It is not our desire to prevent officers joining this department, but we advise them to take such ordinary precautions as are laid down in any respectable emigrant office. Holding these views, it seems to us a little hasty to issue a call for volunteers by "return of post."

### POPULAR VETERINARY SCIENCE.

A correspondent complains of a series of veterinary lectures which have been arranged for by an Agricultural Society in Yorkshire, From other parts of the country we hear of short systematic courses of lectures being delivered by veterinary surgeons under the auspices of County Councils. At Agricultural Colleges a veterinary professor for s a regular part of the teaching staff. In sporting and agricultural papers we nearly always find a column devoted to veterinary matters, and sometimes one in which gratuitous advice is given to correspondents by a member of our profession. Now is this right or wrong? Two answers are given to the question. One side say, "It all tends to encourage owners of stock to treat their sick animals themselves, and to dispense with the services of a veterinary practitioner." The other side say, "The only way to enable the stock-owner to distinguish between the skilled veterinarian and the ignorant pretender is to educate him to some extent as to the disease of animals." Which answer is nearer the truth? It must be allowed at once that the ordinary owner of an animal fancies there is something much simpler in the diseases affecting his horses, cows, and dogs than in those affecting man, and he is far more likely to exercise his "little learning" upon the quadrupeds than upon the bipeds. We should then be extra careful in supplying the "dangerous thing." It must also be allowed that the rampant quackery which exists, not only in this country but in all that enjoy the blessings and curses of civilisation owes its existence to ignorance and credulity. These characteristics are not uncommon in all classes of men, and we can do little to provide against them. If veterinary surgeons are to be found who will write and lecture in a superficial manner about diseases—giving specific formulæ for all sorts of ailments —harm will result to animals from the attempts at treatment advised, and harm will result to the practitioners who are deposed. In our experience the best informed stock-owners are the men who most discountenance quackery, who are least inclined to experiment upon their animals, and who are the first to avail themselves of the assistance to be derived from a properly qualified practitioner.

The good or ill, the right or wrong, of articles or lectures on the diseases of stock, depends entirely on the ability and conscience of the man who produces them. They may be altogether bad or altogether good—in the first category we put all attempts to make men satisfied that they understand morbid processes because they can give them a name, and all attempts to supply empty formulæ as "cures." In the second, we place those which explain the nature of disease, which indicate its cause and give directions which may assist in its prevention. The broad principles of a science cannot be too widely taught. The details of an art cannot be taught in books or speeches; and the man who attempts it is a charlatan whilst his pupils are fools.

## CASES AND ARTICLES

### GELATINOUS DEGENERATION AFTER NEUROTOMY.

By F. Hobday, Student, R.V.C.

The patient was a brown carriage gelding. The history, which I obtained from Mr. Lamb, who was acting as clinical clerk to Professor McQueen, is as follows:

The animal was brought into the Royal Veterinary College Infirmary in a cart, December 31st. 1891, the only previous history obtainable being that it had fallen suddenly lame a month before.

The symptoms presented were: Excessive lameness of near fore limb, and on being trotted the toe was elevated each time the foot reached the ground, progression being entirely on the heels. Separation of the hoof for about two inches at hinder part of the coronet; œdematous swelling from foot to knee, extending during the next three days to the elbow. Great tenderness between the knee and fetlock; below this no sensation whatever, as a pin was inserted in several places round the coronet without causing any symptoms of pain. On further examination two unnerving scars were found. No treatment was adopted, and the horse was destroyed January 6th, 1892.

On dissecting the leg the following appearances presented themselves:

The limb was very much enlarged due to thickening of the connective tissue; the skin being removed only with difficulty. The *tendons* were soft and much thickened. A rupture of the skin at the coronet just where the skin meets the wall of the foot. Large extravasations of blood at the back of the tendons situated in the lower half. *External* nerve-trunk had become re-united; at the point of junction there being a hard lump about the size of a walnut. *Internal* nerve-trunk also had become re-united, and presented a thickened portion at the point of junction, but not so large as that of outer side, and situated in the lower half of the tendon about two inches higher than that on the external nerve. This nerve-trunk was atrophied below the thickening, and had undergone gelatinous degeneration. Judging from the scars on the skin this side had evidently been unnerved a week or ten days previously to that on the outer side. The band stretching across the back of the perforatus between the external and internal nerves appeared on the inside to have become firmly fixed into the tendon.

On removing the hoof, under the sole there appeared a large quantity of very fœtid pus; the laminæ were very much inflamed in patches. There was an enormous thickening of connective tissues in the heel. On cutting longitudinally through the perforatus tendon there was exposed a large blood-coloured mass of a gelatinous appearance, situated on the perforans tendon, the latter being very much thickened and growing to the navicular bone. The underneath surface of the sup. suspensory ligament was much thickened and firmly adherent to the bone; at the posterior surface of the metacarpus there was a quantity of gelatinous substance. The anterior ligament of the fetlock joint was thickened; the navicular bone was entire but shewed lesions of navicular disease, being ulcerated. Section through the bone did not reveal anything further. It may here be remarked that the ulcerations were on either side of the central ridge, and not at all on the ridge itself.

Microscopic examination of the tissue joining the two ends of the nerve together revealed a few nerve fibres; the general appearance was that of granulation tissue containing capillary vessels, which were fairly plentiful and comparatively large in size.

On referring to "Hamilton's Pathology," I see that he states as follows: "When a piece of nerve is cut out the peripheral portion suffers *complete destruction* from coagulation of its myeline and subsequent fatty degeneration of the whole fibre." But instances certainly do occur in horses which have been unnerved, where, after the lapse of a year or so, sensation has returned. Perhaps these are the exceptions which only tend to prove the rule, but in such cases certainly *complete* destruction of the peripheral portion cannot have taken place.

### EPILEPTIC SYMPTOMS IN A HORSE, DUE TO TUMOURS IN THE BRAIN.

By R. C. Irving, F.R.C.V.S.

On Dec 23rd, 1891, I was asked to visit a horse which had fallen down in the stall and been seized with some kind of fit. The patient was a chestnut gelding about fourteen years old, and had been in possession of the owner for eleven years. He was used either in saddle or in harness, but for some days preceding this attack had only been exercised. For the last three or four years he had had stringhalt in the near hind leg, and for the previous three months he would not lie down.

On examining the horse I failed to find any indication of disease. Pulse, respiration and temperature were normal. Membranes and excretions seemed healthy, and the pupils reacted normally. Feeling doubtful about the correctness of the description of the "fit" I gave a dose of physic and promised a call next day.

On Dec 24th, I called twice at the stable, and was fortunate enough to arrive once just as the horse fell in the stall. This he did without warning and immediately convulsive movements of the jaws and limbs set in and lasted for perhaps a minute. This fit resembled the other seen by the coachman, and passed off rapidly leaving a little excitement which subsided in the course of an hour.

I diagnosed the case as one of brain disease, and as a recurrence of the fits took place nearly every day I advised that the horse would not be safe to ride or drive and ought to be killed.

On Jan 6th, the assent of the owner having been given, the horse was killed and a *post-mortem* ex-

amination made. All the internal organs were healthy. The brain, after removal was cut into and disclosed two tumours in the lateral ventricles. These were placed one on either side, were about the same size and shape—in fact might correctly be described as bi-symmetrical.

The tumours were about the size of a small walnut but rather longer, they were soft and of a bluish colour. On the under surface of each could be felt some small calcareous particles. As to their nature I can say nothing yet, as a friendly expert has taken possession of them with a view to a proper pathological investigation.

I hope on another occasion to be able to publish the result of his examination.

## ELEVEN HUNDRED CASES OF GLANDERS.

By William Hunting.

The regulations concerning Glanders, adopted by the local authorities in London are, and have been for years, as effective as the present law will allow. In each district a Veterinary Inspector is appointed who is required to see every reported case and to sign a printed form of License for the removal of the carcase. No infected horse, dead or alive. is allowed to be removed in London even to the slaughter-houses without a licence.

These licenses are made up like cheque-books and the counterfoils—consecutively numbered—retained by the inspectors. From these counterfoils I have compiled the following table which gives some indication of the prevalence of the disease in one Metropolitan district. The first licence was issued on April 20th. 1887, and the whole eleven hundred were copied out consecutivetly to the end of 1891. It will be noticed that a line is devoted to "Odd cases" which number 197. In this group I have put all the licences granted for outbreaks when the number of animals affected did not exceed 4. In most of these cases the owners were cabmen owning two horses, or small tradesmen with from one to five horses. The majority of these outbreaks were traceable to a recently purchased horse. Twenty-two owners of the "odd cases" had from two to four affected animals, and many of them were ruined by the loss.

The most remarkable point in the table is that out of the eleven hundred licences issued, no less than 814 were confined to *ten owners* and that all these stables are still affected except where they have been cleansed by the process of selling the horses and thus disseminating the disease.

In the district referred to, it may be roughly stated that the disease is chiefly maintained in *ten* centres. The "odd cases" are caused by sales from these centres, and from similar centres in every district of the Metropolis. The lesson to be learned seems to be—1st. More stringent regulations for all old centres, and 2nd. Some check on the sale of horses from infected stables.

Table Showing Prevalence of Glanders.

| | Average number of stud | loss in 5 years | Remarks. |
|---|---|---|---|
| No. 1. | 20 | 5 | Stock sold. |
| 2 | 24 | 10 | Now healthy. |
| 3 | 120 | 141 | Still infected. |
| 4 | 170 | 102 | „ „ |
| 5 | 570 | 129 | „ „ |
| 6 | 260 | 172 | „ „ |
| 7 | 72 | 11 | Now healthy. |
| 8 | 95 | 32 | Stock sold. |
| 9 | 200 | 66 | Part of do. sold |
| 10 | 50 | 14 | Stock sold. |
| 11 | 70 | 36 | „ „ |
| 12 | 15 | 5 | „ „ |
| 13 | 140 | 77 | Still infected |
| 14 | 22 | 5 | Now healthy |
| 15 | 55 | 45 | Still infected |
| 16 | 30 | 8 | „ „ |
| 17 | 40 | 6 | „ „ |
| 18 | 100 | 10 | „ „ |
| 19 | 130 | 9 | „ „ |
| 20 | 52 | 10 | Now healthy |
| 21 | 130 | 5 | Still infected |
| 22 | 80 | 5 | „ „ |
| Odd cases | 4 (average) | 197 | Owners mostly ruined. |

## GANGRENOUS LAMINITIS.

By W. H. Brooke, M.R.C.V.S.

The following account of a case, in my experience of great rarity, may have some general interest.

A fine young cart horse was suddenly seized with lameness of the off hind leg, of a character which at once drew suspicion to the foot. The shoe was therefore removed, and the foot subjected to a careful examination. No injury of a concentrated character, however, could be made out, but the whole structure showed much tenderness. The foot was placed in a poultice, which seemed to give no relief, but the pain increased in severity, and a diffused swelling began to manifest itself, involving the whole of the space between the coronet and the fetlock joint. On the fifth day the pain was of so intense a nature as to require the frequent administration of sedatives, the animal being thrown completely off his food; pulse full and frequent; mucous membranes much congested, and a considerable rise of temperature. When seen by me on the fourth day, having been placed in slings, his whole weight was thrown forward, and his neck resting on the edge of the manger in such a manner as to threaten suffocation if a speedy change of position were not made. With the exception of the lame member the weight was thrown on to the front of the fetlock joints which came into contact with the ground. His respirations were extremly hurried and shallow, a groan being given with each expiration.

The sedative treatment was followed up, and, as had been done some days previously, warm water baths and poultices applied to the foot, and an embrocation

containing belladonna ext., and liq. plumb. subacet. used to the coronet. This, however, was without avail, death occurring on the fifth day with symptoms of septicœmia.

A *post-mortem* showed the sensitive laminæ to be in an advanced state of gangrene, being of a semi-pulpy consistence and of a greenish hue, with a space between the sensitive and insensitive laminæ extending around the entire toe, quarters, and heels, containing remains of disintegrated laminæ and inflammatory material; an extremely disagreeable odour pervading the whole.

The cause, although probably influenced by the lymphatic constitutional condition, no doubt had its origin in an injury to the foot of a violent nature, which, however, we were unable to trace.

## NOTES ON A VISIT TO ALFORT.

By Harold Sessions, M.R.C.V.S., F.H.A.S.

Spending a short time in Paris at the end of last year, I took the opportunity of running down to Alfort and the Veterinary School there. Alfort is practically a suburb of Paris, and can be reached with about the same ease that you can get to Richmond from London, either by train or boat. I chose the latter, and getting on the boat at one of the numerous stages that are found on both banks of the Seine, soon came to the landing-stage of Alfortville. A walk over badly-made and untidily-kept roads brought me in about eight minutes to the Alfort Veterinary School. From the outside the buildings present a decidedly ancient appearance, and are a good deal scattered, large open spaces separating one from another. The main block has a disposition forming three sides of a square. On getting to the iron gates at the entrance I enquired at the lodge whether I might have the pleasure of looking round the school, and was at once taken in hand by a young fellow wearing a cap somewhat after the fashion of those worn in the navy. He conducted me to M. Nocard's laboratory, and I noticed two or three young fellows with similar caps, and supposed that the grooms and officials wore a regulation dress. Arriving at the laboratory I was passed over to M. Nocard's assistant; and as my late guide had been very civil I offered him a small sum as a *quid pro quo* for taking up his time, and was much surprised when he politely thanked me and refused it—a kind of treatment one had not been used to in England. A few minutes more in the college showed me my mistake: the gentlemen in the distinctive caps were students, and those in blue blouses were officials who did not follow the student's example in refusing a "*pour boire*." It was vacation time at the college, and M. Nocard was working by himself in his laboratory. I was under the impression that he was an English scholar, and as I naturally preferred to speak in my own native language to airing a few French phrases, my first question was "Parlez-vous Anglais, M. Nocard?" He replied at once "Non, Monsieur," and with a genial smile, "Parlez-vous Français?"

After a short chat he kindly offered to show me round his department and I spent a most interesting time with him. He has in the various incubators large quantities of cultivations of pathogenic organisms which he keeps as a reserve for teaching purposes during the term.

Here, side by side, were flourishing cultivations of tubercle from man, pigeon, horse, cow, fowl, and pig, growing on the surface of the nutrient media as little white or whitish-red nodules.

Then, again, on sterilized potato the fawn-coloured organism of "morve," or, as we call it, glanders, seemed to be growing with vigour. Amongst the many other growths he showed me there were two that I was especially interested in, namely, that of strangles, and that of black quarter. Both these organisms are anærobic, and were being grown under vaseline or oil. I asked M. Nocard if he was satisfied that strangles was a specific contagious disease, and he seemed to think there could hardly be any doubt on the point. He afterwards showed me two well-grown healthy colts that he was going to inoculate with this cultivation as an experiment. With regard to black quarter he thought the protective inoculation was the best means to prevent the serious losses from this disease—even, though, at present its application has not proved an unqualified success in England.

Passing out of the laboratory we came into a room in which a number of small animals were kept for the purpose of testing cultivations and for the diagnosis of disease. Among them was a dog that was being used to diagnose a case of suspected glanders in the hospital. The dog was inoculated with some of the discharge from the horse subcutaneously on the forehead. "Dogs," said M. Nocard, "are very good subjects to take glanders, and in ten days will show a typical glanders ulcer at the point of inoculation."

The department under the charge of M. Nocard certainly has facilities and opportunities for studying disease in a much more complete and interesting manner than we have in our colleges; though we may hope, notwithstanding the laws on vivisection, that this reproach will, in the near future, be removed. I will not dwell on the many small points that interest a visitor to a rival school; but with regard to the general comforts of the students, the buildings and rooms at their disposal, they did not compare unfavourably with the buildings at the London school. Alfort is the largest of the French Veterinary Schools, and the students number about three hundred.

I found Charenton was the nearest point on the river for Paris, being within about three minutes' walk of the school, and taking one of the little Seine steamers, in half-an-hour landed opposite the Louvre, which practically is in the centre of Paris.

The introduction of the English fox to Victoria, Australia, is regarded by some of the settlers as almost as great a mistake as the importation of the rabbit. Poultry-keepers, it is said, have to fence in their birds with high wire netting, or all would be cleared off; and worse, where foxes are plentiful and rabbits for them are scarce they are said to kill the lambs at a rate which causes flock-masters heavy losses.

## ONTARIO VETERINARY COLLEGE.

### December Examinations.

On December 22nd the Board of Examiners for Ontario met in the College. There were present T. Lloyd, V.S., of Newmarket; W. Shaw, V.S., of Dayton, Ohio; J. O'Neill, V.S., of London; W. Cowan, V.S., of Galt.; C. Elliott, V.S., of St. Catherine's; and J. H Wilson, V.S., of Londen.

The Official Board was assisted by several visiting surgeons. Among the visitors may be mentioned Professor Law, V.S., of Cornell University, Ithaca, N.Y.; W. Kidd, V.S., of Listowell; J. Thorburn, M.D., Toronto; C. Sweetapple, V.S., Toronto; J. T. Duncan, M.D., V.S., Toronto; and D. McArthur, V.S., Ailsa Craig.

The Examination was thorough and searching; carried out in such a manner as to be a good test of the attainments of the students. The following gentlemen were successful, and received the Government Diploma, entitling them to practice as Veterinary Surgeons:—

E. A. Bogart, Keltleby, Ontario
T. H. Brooke, Don, Ontario
G. C. Brownridge, Brampton, Ontario
J. C. Carter, Gowanda, N.Y.
J. H. Chesney, Brucefield, Ontario
J. M. Colvin, Wingham, Ontario
T. A. Corsant, Ilderton, Ontario
A. Elgas. Hartford. Michigan
W. Elliott, Delhi, N.Y.
J. Fotheringham, Mason City, Iowa
G. H. Gibb, St. Mary's, Ontario
R. T. Kidd, Listowel, Ontario
J. E. Law, Ithaca, N.W.
C. F. Leslie, York, Nebraska
B. B. Myers, Linville, Va.
B. B. Poole, England
R. E. Stevenson, Toronto, Ontario
L. A. Wilson. Eglington. Ontario
G. E. Young. Toledo, Ohio

# VETERINARY SOCIETIES.

## SOUTH WALES AND MONMOUTHSHIRE VETERINARY MEDICAL ASSOCIATION.

Impressed with the fact that no opportunity occurred in South Wales or Monmouthshire for the meeting together of the veterinary surgeons practising in the district, a joint-circular was issued by Messrs. Storrar of Abergavenny and Stewart of Cardiff to the members of the profession resident in the district, asking their opinion as to the advisability of instituting a Veterinary Medical Association and calling a meeting of those interested.

At the meeting which was held at the Park Hotel, Cardiff, on the 15th inst., there were present Messrs. D. M. Storrar, Abergavenny, J. Dow and J. M. Stewart, Swansea; E. Sayer, Newport, Monmouth; J. Temple, Aberaman; T. B. Muter, Bridgend; W. J. Edwards, Neath; G. H. Simpson, Barry; J. L. Perry and A. C. Stewart, Cardiff,

On the proposition of Mr. Sayer, Mr. Storrar was voted to the chair.

Letters were received expressing approval of the formation of a society and promising to become members, from Messrs. Williams, Abergavenny; Cook, Small, and Hughes, Swansea; Moir, Cardiff; Smith, Chepstow; Barling, Monmouth: Whepham, Cowbridge; and Rees, Brecon.

It was decided to form a Veterinary Medical Association and that the title should be The South Wales and Monmouthshire Veterinary Medical Association.

The following gentlemen were elected officers of the society:—

*President:*—Mr. D. M. Storrar, Abergavenny.
*Vice-Presidents:*—Messrs. J. Dow, Swansea; C. Moir, Cardiff; and J. Temple, Aberaman.
*Treasurer:*—Mr. E. Sayer, Newport, Monmouth.
*Secretary:*—Mr. A. C. Stewart, Cardiff.
*Auditors:*—Mr. J. M. Stewart, Swansea; and Mr. J. L. Perry, Cardiff.

Rules were drawn up regulating society and it was decided to hold two meetings annually, the general meeting in Cardiff on the first Thursday in March, and the second meeting in Swansea in the autumn.

The Secretary intimated that he had been in communication with Prof. Pritchard, acquainting him of the proposed formation of the society and requesting him to read a paper at the first general meeting.

He then read the Professor's reply, consenting to address them.

A vote of thanks to the Chairman and Secretary for their services in instituting the Society terminated the meeting, which was very enthusiastic and augured well for future success.

A. C. Stewart, *Secretary.*

## THE CENTRAL VETERINARY MEDICAL SOCIETY.

An Ordinary General Meeting of the Central Veterinary Medical Society was held at the Royal College of Veterinary Surgeons, Red Lion Square, Holborn, on Thursday, January 3rd, 1892, at 7 p.m. The President, Mr. W. Roots, in the chair.

There were present the following Fellows:—Messrs. A. Broad, W. F. Barrett, H. W. Caton, J. A. W. Dollar, Lent. Col. Duck, W. Hunting, A. E. Gosling, Capt. Glover, F. C. Mahon, P. McOuie, Prof. Penberthy, W. Roots, Capt. Raymond, H. G. Rogers, J. E. Rickards. G. Reddish, J. Rowe, S. Villar, W. Willis, and W. Wright. The visitors present were Prof. Macqueen, Messrs. Morgan Evans, and R. E. Johnstone

The minutes of the last meeting were taken as correct and duly signed.

Mr. H. G. Rogers the Secretary read letters from Prof. Pritchard, Mr. Wheatley, Mr. Hurndall and others regretting their inability to attend. He afterwards read a letter from Mr. Woodger, the Treasurer, who asked the Secretary to express to the Fellows his sincere thanks for their kind vote to him in his great loss. He would be unable to attend the meetings as frequently as in the past and having held his office for greater part of the time the Society had been in existence, it would be as well if someone else took over the duties. He begged to tender his resignation as it would be impossible for him to give sufficient time to the work.

Mr. A. Broad said he feared it would be useless to ask Mr. Woodger to reconsider his determination. He was sure he was not one to write in the way he had unless he had thoroughly made up his mind. He pro-

posed that the resignation should be accepted with very great regret. (Hear.)

Mr. VILLAR seconded the proposition, and in doing so remarked that he had worked with him for four years and was certain they would have a great difficulty in finding a man who would do the work as well as Mr. Woodger.

The proposition was carried unanimously.

Mr. R. C. IRVING, F.R.C.V.S., was next unanimously elected a Fellow of the Society.

The PRESIDENT then called upon Mr. Caton to speak as to some morbid specimens that he had brought.

Mr. CATON said he had brought a couple of bones. One was the case of the dislocation of the femur of a big cart horse, 16 years of age. He got his leg over the halter rein. The horse was put in slings for his inspection. He found the horse could not bear his weight on that leg alone. On placing his ear to the horse's thigh he could hear slight crepitation. He ordered the animal to be destroyed, and this was the result. A large portion of this bone was worn away, and yet all took place under the 24 hours. His next was the case of a horse that was at work on the day it was killed. Here they would see ossification of the flexor brachii. He knew nothing about the animal, having examined it for the Insurance Company. The animal got down and could not rise again.

Mr. ROGERS referring to the first case said it was of some interest because they would remember Mr. Willis bringing a fracture of the first rib before them. There was a small amount of polishing shown and it was rather doubted that it took place in the time named. If they examined the femur before them they would find that a great deal more polishing had gone on in 24 hours. The compact tissue had been broken through and the cancellated tissue considerably encroached upon.

Mr. BROAD thought the specimen important as showing the amount of damage that could be done by attrition in 24 hours.

Prof. PENBERTHY said he remembered the specimen their Secretary had referred to. He held the view and expressed it then that the polishing took "longer time than that which the case seemed to point to." Now here they had a different state of affairs. There was more damage and this was what he should expect to see. They had not the scarification and polishing they had in the other two bones. In this case he should expect it to be worn away rather than polished.

The SECRETARY said the edge of the acetabulum seemed to show a considerable amount of wear as well as the loose tissue at the head of the femur.

Prof. PENBERTHY said the polish was absent here and went to prove the length of time the case had existed.

After a few more general remarks

The PRESIDENT called upon Prof. Penberthy to reopen the discussion on Mr. Villars' paper 'Glanders and Farcy, its Suppression.'

Prof. PENBERTHY said it was like presumption on his part to reopen the discussion which he had not had an opportunity of hearing, but he gave way to the superior judgment of their Secretary and agreed to do it. For the reason he had just named he could not go so fully into the matter as he should like to. He must say here that it afforded him a great deal of pleasure to read Mr. Villar's paper and to notice the lucid and masterly manner in which the matter was brought forward. The importance of the subject to metropolitan practitioners could not possibly be over-rated. It seemed to him that London practitioners should take decided action on the point. They should not treat it merely as a matter of discussion but try to force it home in a practical way. As far as he could gather there did not seem to be unanimity of opinion as to the relation of farcy to glanders Could a farcied horse propagate glanders? if so the horse should be treated as though suffering from so-called glanders. That was the point they must immediately emphasise their opinions on. Until they had a definite opinion on that point it was hardly competent for them to go on to discuss a means of preventing or suppressing it. It was his opinion that they were one disease with different manifestations. Then coming to some other minor points—he thought is was essential they should determine how glanders was propagated. It was stated somewhere that glanders was very rarely propagated by introducing the virus into the respiratory membrane. His opinion was not so. He had experimentally produced glanders by drying the virus and injecting it into the trachea. If the cells could not throw the virus off they would have glanders as a result. That glanders could be propagated through the alimentary canal was open to question. He thought the essayist mentioned that other poisons were ordinarily developed in different parts of the body. They found that they could trace in a large number of cases the manifestation of the virus from the intestines or from the stomach to the mesenteric glands and to the lungs, and to different parts of the body where their last resting place may be. This they very rarely found in glanders. He had only seen one case of ulceration of the intestines and had never found anything in any of the glands. He did not say that such cases did not exist. Probably they did. They were all agreed that by inoculation glanders could be propagated. It was essential that they should thoroughly understand the manner in which the disease might be propagated before they could suppress it. If they were agreed on those points which he thought were essential from a professional point of view, they would have to look to their present means of preventing the disease, and see whether they were perfect. He thought it was clear that they were imperfect and that the delay in slaughtering was fatal to the proper working of the Act as it stood. At present the animal could be kept after it was known to be glandered for a certain time, and in this manner the germs of a disease were distributed. They would all agree that the present law was imperfect and incapable of dealing with the disease—consequently it was for them to suggest to the authorities a means for exterminating the disease. That there was a call for this the returns of the present year would show. In the year 1891 glanders-farcy gave a total of 1357 whereas in 1890 the total was 957, which was something like an increase of 15 per cent. This in itself was sufficient to draw their attention to the matter He thought they were agreed that this disease should be tackled in London. The matter of compensation was one calling for very serious consideration. Figures as to cost had been gone into by Mr. Hunting, Mr. Villar and Mr. Dollar. He thought the turning point of Mr. Dollar's opposition to compensation was the failure of compensation to eradicate pleuro-pneumonia. He thought Mr. Dollar had based his opinion on reports dated back 1884-1890, when the measure was thoroughly permissive, when it was put into the hands of local authorities to carry out in a tinkering kind of way. But what was the present state of affairs? They knew that with regard to the carrying out of the slaughtering by the central Government for pleuro-pneumonia that they were in such a position that day as they had never been in before. He was afraid, therefore, that he could not agree with his friend Mr. Dollar on that point. He was indebted to his friend Mr. Hunting for the statement that before it was carried out by the central authorities there were 46 outbreaks reported per month, whereas since then the number of outbreaks had fallen to seven per month, this clearly proved that the central authorities could deal in an effective manner with preventible disease. And he held that if ever there was a preventible disease it was glanders. He thought they might adduce this from figures he held in his hand. They had, outbreaks 155 in the first

quarter, and cases 275, and in the second quarter outbreaks 177 and cases 341, so that usually when they had an outbreak of glanders there was something connected with it when dealt with by the authorities which limited it to an average of two animals to each outbreak. In his opinion if this matter were followed up it could be dealt with more easily than in the case of pleuro-pneumonia. His idea was that a staff of inspectors should be appointed for a time not to be limited to three years or to 12 years. It was absolutely essential that they should be veterinary surgeons, and they should have similar powers to those given to the inspectors under the other Act. They should be allowed to scour the country and hunt down every case. With regard to the manner of compensating he really did not think that this association had anything to do with that. If he were the legislature this would be his opinion—that all animals held as property was only valuable as the law made that property valuable. If a man bought a horse for £50 knowing that it was liable to be glandered, a horse that would be worth otherwise £65, they must not give that man £15 because he has his horse killed. They must not compensate a man who had a glandered horse. There was no reason why compensation should not be paid where animals were killed by order of the inspectors as suspicious. The amount of that could be arrived at the horse-coroners' inquests. One gentleman had suggested that horses that had been in contact with infected animals should be branded in some way and be allowed to work. He must go back to his original assertion about the ability of farcied horses to distribute the germs of the disease. I have seen nothing as to drinking troughs distributing the virus of glanders. The water at a summer temperature does not immediately kill the glander bacillus and when a horse came thirsty and dived part of his head into the drinking trough, it was natural that the mucus should adhere to the schneiderian membrane, and that the animal should occasionally swallow the virus which was in the mucus. He was afraid his remarks had been rather rambling but he had tried to speak on two or three points which he thought it was essential for them to emphasise. They must throw the onus on their Secretary whose general good judgment simply allowed him to let his name stand as the opener of that evening's discussions which he believed should be extremely interesting and which he believed would, if driven home, be effective. (Cheers.) Prof. Penberthy afterwards rose and said that at Camden Town they passed a resolution on November 5th, 1890, that a letter should be sent to Mr. Chaplin, but acting on the suggestion of their Principal who knew a great deal about the matter, it was decided that it should stand on the books.

Mr. Rogers said if they made a comparison between pleuro-pneumonia and glanders, they should take into consideration that the latter disease was much more centralised, and it was fair to infer that it spread eccentrically If they were able to stamp out the disease in its centres it would disappear from the surroundings. When they examined the condition of England and Scotland with regard to the outbreak of 1890, there appeared to be three great centres, London, Glasgow and Liverpool. One might almost regard as a farce the inspection of the slaughter-houses of the Metropolis. The inspector walked in—occasionally he saw the animals, and sometimes he did not. The inspections should not be of such a slip-shod nature, and any measure framed ought to take into consideration the official inspection of these slaughter-houses through which all the carcases passed. The previous discussion seemed to turn very much on compensation or no compensation. He fully recognised compensation as a valuable factor in suppressing the disease and with compensation the owner would report instead of hiding cases of disease. But he did not attach so much importance to it as some appeared to do. It was simply one possible help in suppressing the disease. There were many others. He thought more efficient inspection would have quite as much to do with suppression as any scheme relying upon compensation. He would advocate mapping out the Metropolis into a certain number of districts and appointing inspectors at salaries that would enable them to do without private practice; letting them be inspectors pure and simple. (Cheers.)

Mr. Broad said, as to compensation I would raise no great objection if only it were made small, there is no doubt much to be said in favour of the principle; on the other hand shrewd and practical horse-owners need no bribe to induce them to rid their stables of farcied or 'suspicious' horses. One argument in favour of compensation, to my mind, is that it would enable supervision to be exercised over the stables, this should be the *quid pro quo* demanded in the interest of the ratepayers, for if there is one point needing attention in the endeavour to stamp out glanders in its London home it is the complete renovation of many of the old stables where case after case of glanders has occurred till the soil is impregnated with poison. As London cowsheds are licensed and supervised so should be the stables of cab and omnibus horses. As to the most common mode of contagion my impression is that it is through the respiratory tract more than the alimentary, it is true that nosebags are often a factor in the spread of disease, but here the germs may be inhaled rather than taken by the mouth. I have not the dread of water troughs which is so general though it is difficult to adduce evidence; but the disease is chiefly met with among cab and bus horses, and if troughs were so fatal I would expect it to be much more widely disseminated. Returning to the question of compensation I would not sanction any distinction being made between farcy and glanders; neither on this point nor any other would I make the slightest difference in treatment between them, they are one and the same disease, there should be no doubt on this question.

Mr. Barrett in the course of his remarks said he was convinced that hundreds of horses were affected with glanders and farcy, and that the advent of some depreciating influence was sufficient to awaken the germ. He should like to make one or two observations on the propagation of glanders. No doubt glanders was mostly propagated by water-troughs for this reason. Perhaps in a stud of horses there is one acute case of glanders, and no other animal is affected. The question came how could that animal receive the disease except by drinking? If water-troughs were abolished glanders and farcy would be much less frequent. The increase of mortality in 1891, was doubtless due to the wide prevalence of influenza. As a result of that glanders in many cases became developed in apparently healthy horses. That alone would account for the high record of cases in 1891. They could not stamp out the disease in London unless they resolved to slaughter, and here came in the question of compensation. In his opinion the owner of the animal slaughtered should receive two-thirds the value of the horse before it was affected. If they slaughtered they must take care that that animal did not affect others. He was opposed to the present mode of inspection in London. If they had a case of glanders they must call in a veterinary surgeon. Two or three days elapsed perhaps before they got his opinion. The animal was kept alive and allowed to affect others. This he would have altered by a quicker inspection and more rapid slaughter. (Hear.)

Mr. Dollar said he should like to make one or two remarks in the nature of a personal explanation. One of the foregoing speakers had referred to a suggestion of his that those horses which had been associated with glandered ones or farcied animals should be branded in the foot and allowed to work. The objection made to that suggestion was that there would be a danger to the general body of

animals. Of course this suggestion was only a compromise. It rested on the recognition of the fact that it was quite impossible for them to tell in very many cases whether an animal was suffering from farcy or glanders or not, and the suggestion that those animals should be branded would merely result in their being readily recognised. It was only a slight provision to help the work of reporting and slaughtering. It was merely a portion of the system he would work in opposition to compensation. It seemed of all the speakers only one would recommend compensation of itself as a means of dealing with the disease, no one else went further than to suggest it as an auxiliary. The position he had taken up was not that they should absolutely do without compensation, but that they should try every other available means before resorting it. If he were convinced that compensation was the only possible means of dealing with the disease he should be only too happy to give his support to it, but he recognised that there might be many other methods which would cost the country much less and which would be probably, just as effectual.

Mr. VILLAR in replying referred first to Mr. Hunting's criticisms, and said he was pleased that they did not differ on any essential point. They seemed to differ, however, on the compensation question. They would perhaps remember that in his paper he advocated giving compensation for all animals compulsorily slaughtered whether affected with farcy or glanders, or whether suspicious. In Mr. Hunting's speech he said he was prepared to allow that the arguments were strong for including more than farcy in any compensation scheme. He took it that Mr. Hunting and himself were agreed on these points, and he took this opportunity of thanking him for the kind and courteous way in which he opened had the discussion on his (the speaker's) paper. Mr. Dollar confined his remarks almost entirely to the question of compensation, to which he objected. But he did not see what his arguments had to do with the suppression of glanders. Mr. Dollar said that the giving of compensation had not eradicated pleuro-pneumonia and that therefore it would not eradicate glanders. He could not bring himself to believe that Mr. Dollar seriously thought that during the last six years deaths from pleuro-pneumonia had increased by six times. It was well-known to all persons engaged in the cattle trade that pleuro-pneumonia during that time had decreased considerably and it was due to the fact that compensation had been more liberal. Cowkeepers now almost invariably reported outbreaks of pleuro-pneumonia, but four years ago it was a general thing for them to hush cases up. That proved the advantage it would be to compensate in the case of glanders. (Hear.) Mr. Dollar made a suggestion that the hoofs of suspected horses should be branded, but sale would then become impossible, and probably it would be impossible to have the horses baited in livery yards, or shod at public forges. The owners would be put to serious disadvantage and loss. It would be a grand thing, but the owner would suffer for the good of others. He thought the owner should be compensated if they took such liberties with his stock. Mr. Dollar went into figures as to the expense that would be incurred by giving compensation, but he did not think it was quite necessary to go into those details inasmuch as Mr. Hu ting had at an early period of his speech withdrawn the remarks made in his book elsewhere. Mr. Dollar thought that veterinary surgeons should be obliged to report cases of glanders as soon as seen. He (the speaker) did not think so for a moment. It would be offering an additional inducement to horse owners to apply to unqualified men, or to treat horses themselves. The position of a veterinary surgeon towards his client was one of confidence. If they were to act a kind of spy it would certainly make the profession unpopular. Mr. Samson had made the practical remark that there were many low class dealers in London who would be glad to buy glandered horses with the view of getting compensation. He (the speaker) looked upon this one difficulty as perhaps the chief. Professor Penberthy had given them some very interesting and important facts. They could not pay too much attention to the fact pointed out by Mr. Rogers that the disease spread eccentrically. He was afraid two-thirds compensation suggested by Mr. Barrett would be too much to give. The value of a horse depended on its working powers. To give a large compensation would, he was afraid, only set low-class dealers to work. Mr. Barrett, also pointed out that the veterinary surgeon should call in an inspector. Not at all. He must inform the owner that he must give notice to the police, and he could depend on it that the inspector would be there in a few hours. He had no further remarks to make. He should like, however, to thank them for the kind manner in which they had attended these meetings. It was a matter of pride to him that he had had the honour of introducing to their notice a subject which had drawn the largest attendance that had ever been held by the Central Veterinary Medical Society. (Cheers.)

Mr. HUNTING then moved "That this meeting is of opinion that the present law concerning glanders and farcy is insufficient; that all cases both of glanders and farcy when detected should be slaughtered; that all suspicious cases should also be slaughtered subject to compensation."

Prof. PENBERTHY seconded Mr. Hunting's resolution.

Mr. ROGERS thought the propositions should be put separately.

Mr. DOLLAR said the part as to compensation gave no clear idea. He could not support Mr. Hunting in compensating persons for the slaughter of suspicious cases where those suspicious cases were proved to be suffering from glanders or farcy.

The resolution was then divided as under:—

Mr. HUNTING moved, and Prof. PENBERTHY seconded, "That the present law is insufficient." Carried.

Mr. HUNTING moved, and Prof. PENBERTHY seconded "That all cases both of glanders and farcy should be slaughtered without delay." Carried.

Mr. HUNTING moved "That suspicious cases should be slaughtered subject to compensation." He said this simply meant that if an inspector did not know what the case was he should have the power to say "I will give you compensation for the horse if you will have it killed."

Prof. PENBERTHY withdrew his support.

Mr. RICKARDS seconded the resolution.

Mr. DOLLAR moved as an amendment "That suspicious cases proving on *post-mortem* examination to be free from glanders or farcy be compensated for."

Prof. PENBERTHY seconded.

The amendment was lost and

The original resolution was carried.

Mr. Hunting then moved "That in the opinion of this meeting compensation should be given for all cases which appear to be either of doubtful nature or possibly curable." This he said would cover cases where farcy was so mild that it looked as if it might be cured even temporarily.

Mr. CATON seconded.

Mr. BARRETT thought the resolution absurd

The resolution was lost by a large majority.

Mr. ROGERS then proposed a vote of thanks to Mr. VILLAR for his very able paper, which was seconded by Mr. DOLLAR, and carried unanimously.

Mr. RAYMOND next proposed a vote of thanks to Mr. CATON for his valuable specimens, which was seconded by Prof. PENBERTHY and also unanimously carried.

Prof. MACQUEEN was nominated for fellowship of the Society.

H. G. ROGERS, *Hon. Sec.*

## THE WESTERN COUNTIES VETERINARY MEDICAL ASSOCIATION.

The half-yearly meeting of the above Association was held at the Rougemont Hotel, Exeter, on December 17th 1891. The President, Mr. Willlam Penhale, F.R.C.V.S. of Barnstaple, occupied the chair, and there were also present Prof. Axe, London; Messrs. S. Burton, Torquay; J. A. Collings, J. P. Heath, W. B. Nelder, S. Pethick and W. Roach, Exeter; G. Golledge, Sherborne; T. Olver, Truro; R. E. Penhale, Hatherleigh; W. Penhale, Holsworthy; F. Place, Exmouth, and the Secretary, W. H. Bloye, Plymouth.

Letters and telegrams regretting inability to attend the meeting were received from Prof. Penberthy, Messrs. Chase, Parsons, Stewart, James, Harvey, Elder, Oliver, and Capt. Ringe, A.V.D.

The minutes of the last meeting were read and confirmed.

Messrs. Collings, Plymouth and Gibbing, Tavistock, were unanimously elected members of the Association.

The President in referring to the recent Congress on Hygiene and Demography held in London and which he had attended as a delegate of the Association testified to the manner and importance of the work done by members of the veterinary profession in Section 3.—That referring to the communicability of Disease from Animals to Man.

Mr. Golledge gave an interesting description of the cases of two cows which had recently come under his care, the animals had suffered from great nervous excitement which ran on to paralysis and eventually terminated in tetanic convulsions, many of the symptoms simulated those of hysteria, but others differed so completely from those of that affection that he was unable to reconcile their identity.

### Epilepsy and some Epileptiform Diseases.

By Professor Axe.

After thanking the Society for the honour they had done him in inviting him to Exeter, Prof. Axe said the subject of neuro-pathology in the lower animals had received but scant attention from the veterinary profession, and although it might not present those elements of interest arising out of psychological considerations, which rendered the subject so important and attractive to the practitioner of human medicine, it nevertheless constituted an important department of animal pathology. By modern methods of investigation many new truths concerning the function of the brain and lower centres had been developed during the last ten years, and many obscure points in cerebro-spiual disease had been cleared up. It could not, however, be said that we had used this new light so freely and effectually as we might have done in our too often fruitless search after the origin of disease, nor had we taken due advantage of the teachings of physiology in its application to the therapeutics of surgery.

In looking round for a subject upon which to address them, he had failed to find one upon which he was able to say much that was new, but in the subject of epilepsy he thought there were many useful and important truths which might be repeated and emphasised with advantage By some pathlogists epilepsy had been included in a small group of affections known as "paroxysmal neuroses." He did not, however, intend to restrict the term epilepsy to that form of the malady which was at once recurrent and idiopathic, but would include in it all those non-febrile convulsive seizures in which sudden loss of consciousness was identified with tonic or clonic spasm of brief duration. He saw no practical advantage in applying the term "epileptiform" to the clinical phenomena of epilepsy, because they are secondary and symptomatic. Epilepsy presented itself from time to time in all varieties of our domesticated creatures, and at all periods of life, but more especially during infancy and old age. Dogs appeared to be especially liable to it, and great losses were sometimes experienced in our lamb-flocks and pig herds. In our horses it frequently presented itself, in what is generally spoken of as "megrims," and the "fits" of young cattle were for the most part epileptic. Although mostly sporadic, it occasionally prevailed in our kennels as an endemic and idiopathic affection, attacking many and sometimes all the members of a pack. In this form Prof. Axe had known it to continue for weeks and months. Referring to the causes of the disease the Professor pointed out that while in some instances as those last referred to they were essentially idiopathic, in the large majority of cases in the lower animals epilepsy arose from some central or peripheral nervous irritation or organic lesion. Hœmal changes or blood contamination might also be regarded as a factor in its causation. After particularising the causes under these several heads, the symptoms of the disease in its various degrees and forms were fully described, and the lecturer concluded by discussing the measures of treatment to be adopted in the course of an attack and the best means of *preventing recurrence*.

At the dinner which followed the meeting, after the usual loyal toasts, Prof. Axe in a felicitous speech proposed the health of the President, Mr. Penhale, and in doing so took the opportunity of congratulating that gentleman upon his recent accession to the civic bench, as Mayor of Barnstaple. The toast was received with acclamation, and the President in reply dwelt emphatically upon the usefulness of this and kindred Associations, not only to the profession, but to the public generally.

W. H. Bloye, *Hon. Sec.*

# EXTRACTS AND NOTES.

## NOTES OF A CASE OF ACCIDENTAL COW-POX.

By E. Mansel Sympson, M.D. Lincoln.

As accidental, or, as Ceely calls it, casual cow-pox, is not common, and as with the spread of vaccination and revaccination, more and more perfectly performed—protective not only against small-pox but against cow-pox itself—this complaint will become rarer still, the following case may be of some interest.

My patient is the wife of a small farmer living in a village a few miles from Lincoln, and her history of the outbreak among the animals is as follows. They keep two cows, and some four weeks before my first visit one cow started with pimples on the teats and udder; these formed blisters, which burst while milking was proceeding. The teats became swollen and very tender; then scabs, dark red or almost black, appeared on the sores, and when these fell off scars were evident for some time. The second cow was attacked about a week after the first. I saw both the infected cows at my first visit, that is, about four weeks and a-half after the beginning of

their illness. Then the teats of one cow had five or six oval scabs or crusts, in size between that of a sixpence and a shilling, very hard and reddish-brown in colour. The teats were then about their natural size but were still very tender. When one of these crusts was removed the sore beneath was rather deep and conical, and rapidly filled with sero-purulent fluid. The sores on the second cow's teats had much the same appearance, though in one or two places there was more of a vesicular aspect, with a firm, raised, and hard edge. The second plate of Ceely's, reproduced in Dr. Crookshank's first volume on *Vaccination*,* represents almost exactly the appearance I saw save for the blackened end of the teat My patient told me that the cows, particularly in spring and fall, had this complaint, but I suspect it was only the blister-pock—a comparatively common and trivial matter—for I understand that cow-pox usually recurs at some distance of time in the same herd, and is certainly far from being so common as she would seem to imply. Their milk, she added, was much lessened in quantity and very poor in quality, so that, especially as it was contaminated with pus, lymph and blood from the sores in milking, it was all thrown away. As far as I could learn, there was no small-pox in or around the village, nor had there been any for several years. The history of the patient's illness is shortly as follows:—

She had been milking the cows for three or four days, as her husband was very busy, and on April 3rd, 1890, as she was bringing some firewood, she scratched or pricked rather deeply the second finger of her left hand. On Sunday, April 6th, she noticed at the place of the thorn-prick a small hard and painful pimple. Next day, April 7th, the finger began to swell and the pimple enlarged. On Tuesday, April 8th, she was rather feverish and had one or two slight rigors. The place became more and more painful. I first saw her on Wednesday, April 9th. The wound was then about the size of a silver penny-piece, raised and very firm, whitish in colour, with a vivid blush all round, and extending up the finger nearly to the hand, which was swollen. As she then thought there might be a portion of the thorn embedded in the place, and before I had heard any of the history of the cows, I incised the part; but no pus came away, only some blood and serum. It was exceedingly tough to cut into. On April 10th, it was forming more into a large vesicle. The forearm was swollen, with reddened lines of lymphatics running up to the gland at the bend of the elbow, which was enlarged and tender. Her temperature was 103.6 F., her tongue was coated, and she had severe headache and nausea.

On April 11th, her arm had commenced to swell; it was tender, very red, and full of tingling, and the axillary glands were large and painful. Her temperature was 104.2, pulse 110. All this pain and swelling of her arm she was inclined to attribute to her having eaten some pork recently, as whenever she did so she almost invariably suffered from severe outbreaks of urticaria of an erysipelatoid character: and probably this tendency of hers did give more prominence to the cutaneous affection which originally was due to the vaccination. On April 12th, she was decidedly better, her temperature being 102, her pulse 96. The swelling of her arm had gone down, the glands much smaller, and the hand was not so swollen. The inoculation place had now exactly the appearance of a five-days' old vaccination mark.

On April 13th, she was much better all round. On the 14th her arm was very nearly of its natural size; the forearm also had lost its pain and tenderness; the inoculation was about as large as a fourpenny-piece, still very firm, especially at the edges, which were raised, while there was a slight depression in the middle. Her temperature was 99.4, her pulse 86. The constitutional symptoms soon disappeared, and by the end of the week the characteristic "tamarindstone" crust had formed on the wound.

About three months afterwards the scar was very evident, looking in every respect like an ordinary vaccination mark. A week ago—that is nearly twenty months after the inoculation—the scar had faded considerably, and was very nearly the same colour as the surrounding skin. One particularly interesting point about my patient must not be forgotten: she had not been vaccinated since her infancy—she is now about 35—and I could discover no mark whatever of that vaccination.

* *History and Pathology of Vaccination*, E. M. Crookshank, vol. i, plate ix, Figs. 1 and 2.

## ACTINOMYCOSIS IN AMERICAN MEAT.

Probably the most interesting case in the legal history of veterinary sanitary science or meat inspection in the United States was the suit of Greenhut *v.* Pearson in the circuit court of Peoria Co., tried at Peoria, Ill., Nov. 12 to 24 inclusive, before Judge Shaw.

J. B. Greenhut, the plaintiff, is heavily interested in cattle feeding, utilising for this purpose distillery refuse. J. M. Pearson was, at the time when the ground for the present action was laid, the Chairman of the State Board of Live Stock Commissioners of Illinois, a board created by the laws of Illinois for the purpose of controlling or extirpating contagious or infectious diseases among animals.

Upon the advice of the State Veterinarian, in conjunction with several prominent veterinary and human sanitarians, this state board had placed in quarantine about one hundred and thirty cattle affected in varying degrees with actinomycosis, and refused to allow the affected animals or their carcases to be placed upon the market, and finally, except those who died in quarantine or were destroyed for the purpose of making autopsies were shipped to Chicago and "tanked" and their products used for commercial purposes.

Mr. Greenhut brought suit to recover the value of the cattle at a sound meat valuation.

The first witness was Dr. Hickman, chief inspector for the Bureau of Animal Industry at Chicago, Ill. He maintained that actinomycosis was transmissible by inoculation from animal to animal and from animal to man. He had had an extensive experience with the disease and had studied it extensively in connection with his duties as a meat inspector.

On cross-examination he became badly confused, admitted that he had made no critical study of the disease, had seen *no post-mortem* examinations worthy of relation, knew nothing of the disease in man, did not know how many cases of actinomycosis had been discovered and reported in man in his own city during the past year, was certain that man could not get the disease from affected cattle, but that they most likely contracted the disease by eating barley or grass.

After admitting that the actinomyces found on vegetation, in affected animals, and in man were all identical, and that man or animals might contract the disease by micro-organism from vegetation becoming transplanted to an abraded surface or other suitable ground for growth, he was unable to explain why the actinomyces growing in animal tissues were not equally competent to cause actinomycosis in other animals or man in like conditions. In his capacity as inspector of export cattle he admitted

that he refused to tag for exportation cattle affected with actinomycosis, and when pressed for his reasons for condemning these for live export after he had sworn their meat was perfectly fit for human food, he could give no clear explanation of his actions, but could only say that he held them for *post-mortem* examination, although he did not himself make such *post-mortems*, nor did he personally know that such examinations were made.

Dr. Vogel of Chicago, who represented himself as a graduate of Vienna and Munich veterinary schools, and with a practical experience of over fifty years, fully substantiated Dr. Hickman's position, and said (through an interpreter) that no matter how large the actinomycotic tumours, nor how great the suppuration or decomposition, the meat of the animal, except the tumour itself, was perfectly fit for human food. This, he said, was the opinion of the best German authorities, and when pressed on cross-examination for the names of his authorities he cited Friedberger and Frohners's Spec. Path. and Therap., and these authors he was forced to admit described actimomycosis as an infectious disease. There seemed to be a total want of abhorrence in his nature for any diseased or decomposing meat, to such an extent that his evidence was repulsive to every one.

Dr. O. Schwartzkopff, a graduate of the Berlin veterinary school and now dean of the veterinary department of the University of Minnesota, said that actinomycosis was not contagious but could be transmitted from animal to animal experimentally, but that while experimental inoculations would produce the disease, accidental inoculation (even in same parts, would not transmit it. The actinomyces were too large to pass through the capillaries, hence could not be disseminated by means of the circulation. The disease does not, according to his researches, affect the meat of the animal, but only the head and neighbouring lymphatic glands. He had not seen it in the muscles or spleen. Upon being shown Ponfick's "Aktinomykose des Menchen" with coloured plates showing the disease in muscles of heart and in the spleen, he admitied that it did occur in those parts and that there was no way known to him to account for the disease in these organs except the micro-organisms be carried by the circulation.

On cross-examination he admitted that he had recently said over his signature, and that such assertion was true, that in his mind parts of animals affected with actinomycosis were unfit for human food, but still maintained that the disease could not be transmitted from animal to animal nor from animal to man by accident, but that it could be contracted by either from accidental inoculation with the same germ growing upon plants. When asked to explain why the actinomyces of plants would, in his opinion, produce the disease in animals and the identical micro-organism from animal tissues would not, he could not answer. Dr. F. S. Billings, professor of pathology and histology at the Chicago Veterinary College and for several years a student in Germany, was called on behalf of the plaintiffs.

Complaining of illness, the cross-examination was made very brief, and mainly directed toward showing his egotism. He asserted that he had made the infectious diseases of animals his sole study for a number of years, day and night. He was quite positive that he knew a *great deal* about infectious diseases of animals, more than all other scientists on the American continent, and admitted that before coming upon the stand that he had asserted he was "the Jesus Christ of infectious diseases in America."

The defendants called as witnesses, Prof. A. H. Baker, of Chicago Veterinary College; Dr. Chas. N. Hewitt, Secretary Minnesota Board of Health; State Veterinarian Casewell, of Chicago, Ill.; Assistant Veterinarians Scott of Peoria and Page of Rockford; Dr. Nattress, of Delevan, Ill.; W. L. Williams, formerly Assistant State Veterinarian, of Bloomington, Ill., now Professor of Veterinary Science in Perdue University, LaFayette, Ind., and affidavits were submitted from Prof. James Law, of Cornell University; Dr. A. Liautard, Principal American Veterinary College, N.Y.; Dr. Paul Paquin, of Mich.; Prof. Jos. Hughes, of Chicago Veterinary College; Doctors of Medicine Ochsner, Murphy and Schirmer of Chicago, etc. These witnesses all gave essentially the same testimony as to the nature of actinomycosis; that it was due to the invasion of the tissues by the ray fungus or actinomyces, which was probably obtained originally from vegetable food products, and gained entrance into the system through wounds, abrasions, glandular openings or very delicate membranes; that it had been transmitted experimentally from animal to animal and from man to animal; it is contagious, although not highly so, and can, so far as science teaches us at present, be as readily transmitted by transplantation of ray fungus from animal to animal or animal to man, as by means of the same fungus conveyed from a plant to animal or man; that the actinomyces found on vegetation, in the tumours of cattle and in actinomycosis of man are all, so far as is known, identical.

Many of the witnesses had made *post-mortem* examinations of affected cattle, and had found the disease in bones of jaws, face and head, in lymphatics of head, throat, thorax, deep inguinal region, and those lodged in the intermuscular connecti e tissue of the legs; in the tongue, pharynx, lungs, liver, spleen, stomach, bowels, mesentery, prepuce, etc.

The disease, in their minds, is dangerously contagious, in the sense that the life of the affected patient is greatly jeopardised. They believed the disease capable of entering into and passing through the lymphatic and hæmal circulations, and based their conclusion on, first: the size of the club-shaped mycelia of the ray fungi (without reckoning the necessarily smaller spores which the mycelia bear,) which are not generally so large as the blood corpuscles, and hence capable of passing through the capillaries; second, the presence of actinomyces in the spleen and in heart-walls, etc., where it could not well gain admission except through the circulation. The external manifestations form no criterion as to internal distribution of the ray fungus, so that an animal with but a small external tumor or a mere cicatrix, after undergoing a so-called cure, may show distinct evidence of the disease in various internal organs, and since the parasite is microscopic, it is impracticable to say that a portion of an affected animal is free from invasion, hence the meat should be condemned as unfit for human food.

The defence also submitted a report of veterinarians Casewell, Scott, Page and Williams of an examination of the cattle in question, and of *post-mortem* examinations on three of the affected animals, which showed the disease in various internal organs.

Evidence was introduced on behalf of plaintiffs, citing cases where affected animals had co-habitated with healthy animals for long periods of time without result, and the defendants introduced considerable similar evidence to prove the contrary, by citing cases where a large percentage of certain cattle herds had become affected apparently through cohabitation with diseased animals.

After being out two days. the jury reported that they could not agree, and hence were discharged. It is probable the plaintiffs will demand another trial.

*American Veterinary Review*

## Obituary.

Died recently from pneumonia, at Brantford, Ontario. the wife of Mr. Geo. Kidney, M.R.C.V.S., late of Belfast.

### A Veterinary Professor's Action.

An action was raised recently in Edinburgh Sheriff Court by T. Herbert Lewis, 1 South Street, Crewe, Cheshire, against W. Williams, Principal of the New Veterinary College, Edinburgh, for £50, being the balance of salary due to him as lecturer on anatomy in the defendant's college. The pursuer, in his condescendence, stated that he had discharged his duties for the full session and had been paid £150 to account of his salary of £200, leaving £50 due. The defender held that the engagement was per year, not per session, and as pursuer wrote resigning his appointment nearly four months before the expiry of the year, he was not entitled to payment for the last quarter. Sheriff Rutherford, in his interlocutor, finds that the pursuer has failed to prove that any balance of his salary was due to him by the defender, and he therefore decerns for the defender, and finds the pursuer liable in expenses. —*Edinburgh Evening Dispatch*, Jan. 20th, 1892.

### ARMY VETERINARY DEPARTMENT.

Thomas Jordaine Stanley Clarke, gent., to be Veterinary-Lieut. on augmentation (Jan. 6).

## CORRESPONDENCE.

### "HOOSE" IN CALVES.

SIR,

Seeing correspondence is going on in your columns regarding Hoose in calves I shall be glad if you will insert the following:—

A client has at the present time eight calves that have never been turned out, nor have they had any green food, and still are affected with Hoose: there are on the same farm other affected animals, but these had all been pastured on land we know will cause Hoose. The lot have been fed on porridge for some time, and have been allowed to drink indiscriminately from the same buckets. The mode of infection of the eight is, I think, to be found here,—if one observes a calf drink from a bucket, he will see that as the fluid gets finished the calf begins to salivate or "slaver" freely and a quantity of the saliva is expectorated into the bucket, now if the first animal suffered from Hoose and the rest did not, is it not probably that the second would take up the expectorate, which will rise to the surface when the bucket is refilled, and which it is likely will contain ova or even young Filariæ, the latter thus gaining direct entrance to the second animals respiratory apparatus—if others have thought this a likely method and found similar results, it is of the utmost importance to serve calves from different buckets than those used for infected animals.—Yours faithfully,

Garstang. ARTHUR BREAKELL.

### MORE COMPETITION.

DEAR SIR,

On making my usual market-day rounds I found the enclosed circular on a table in one of the hotels. My attention was called to it by a farmer, who jocularly remarked that he would not require the services of a veterinary surgeon, now that they were going to be taught to docter their own cows and horses—there's many a true word said in jest.

On perusing the effusion I found that a course of twelve lecture was going to be given, commencing on January 18th, on Veterinary Science, consisting of the ready methods of dealing with emergent cases of disease and accident in animals, etc. A foot note stated: "The lectures are intended for all who may wish to attend them, whether members of the Agricultural Club or not. There will be no charge for the lectures, and students can go in for examination at the end of the course, which will consist of about twelve lectures. It is hoped a large number of students will attend the lectures regularly."

On referring to the Register of Veterinary Surgeons I found the lecturer was a member of forty years standing. He is represented in the advertisement bill as "Lecturer to the Yorkshire College, Leeds."

Now, Mr. Editor, I should like to know in what way a man is likely to benefit his profession by stumping the country as a veterinary lecturer, and teaching the stock-keeper how to concoct nostrums and act as his own veterinary surgeon? Don't you think that there is plenty of competition with the numerous veterinary parasites we have to contend against—veterinary counter-practice, etc.?

It is a plain fact that these veterinary lecturers and pamphlet writers will gain one object, and that is to lessen the income of the veterinary practitioner; but whether they find satisfaction by so doing is best known to themselves.—Yours truly,

ANTI-HUMBUG.

SIR,—In your report of the last meeting of the R.V.C. Medical Association, I am made to say that 75 per cent. of cases of parturient apoplexy recovered under the chloral hydrate treatment. What I did say was that I had been informed by several veterinary surgeons that about 75 per cent. of their cases recovered under this treatment if adopted in the first stages of the disease. I have always held that parturient apoplexy was due to thrombi in the sinuses of the head; and those cases which I have had the opportunity of examining after death coincide with this view. In one *post-mortem* which took me several hours to make, I found *ante-mortem* clots in the brain sinuses, and in the hepatic and pulmonary vessels.

I think that many have noticed in bleeding affected animals the blood drawn coagulates very readily and with great firmness, and also that in the latter stages the animals will not bleed freely; the former shows that the blood is rich in fibrine-forming albumenoids, the latter that there is retardation in the blood flow.

Chloral is said to be one of the most effectual agents in preventing any tendency to coagulation of blood in the living body. Is this the reason of its efficacy in this disease? Again, How do we prevent the disease in fat cows? Why by giving the cow an aperient, and keeping her short of food for three or four weeks before she is due to calve, conditions which are likely to reduce the richness of the blood. Many of your subscribers no doubt adopt the chloral treatment; it would be of great value if they would record their experience. Trusting I have not encroached too much on your space,

Believe me, yours sincerely,

ALFRED C. WILD,
President R.V.C. Medical Association.

Royal Veterinary College,
Camden Town.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. J. Cooke, T. F. Hobday, A. C. Stewart, E. Blackman, W H. Bloye, A. C. Wild, J. R. Welsby, T. H. Merrick, W. Anderson, W. Aulton.